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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,410	09/28/2001	Kanji Kawakami	Q66456	2356

7590

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EXAMINER
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WIMER, MICHAEL C

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/964,410

Applicant(s)

KAWAKAMI ET AL.

Examiner

Michael C. Wimer

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/5/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Davies et al. (5345222).

Regarding Claims 1 and 5, Davies et al show in Figures 6a and 6b, an antenna comprising: a converger, including a conductor 61 (see col. 3, line 56 to col. 4, line 3 and lines 49-58) which converges a magnetic flux of an EM wave, having a through-hole, into which the magnetic flux is converged, at a center portion of the conductor, and a cut-out 64 extending from a part of the through-hole to an outer periphery of the conductor, and a converter, coil 63, which converts the converged magnetic flux into voltage, all arranged as claimed.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3,4,6,7 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al. (5345222).

Regarding Claim 3, Davies et al show in Figures 7a and 7b, a combination of the embodiment of Figures 6a & 6b, where the function of the first and second components 61 and 62 are combined in a single sheet element 71. In order to avoid resistive loading, the sheet is slit in radial directions to the coil 72. It would have been obvious to the skilled artisan to employ such radial slits in the sheet conductor 61 for this same purpose of reducing resistance against current flowing in the conductor.

Regarding Claim 4, at col. 4, lines 49-54 suggest that the sheet conductor may be a laminated structure. Thus, it would have been obvious to the skilled artisan that the laminated plates define a plurality of sub-plates.

Regarding Claim 6, the coil antenna system is used in the "kHz" range (col. 2, third paragraph), and therefore it would have been obvious that the antennas are smaller than the wavelength used.

Regarding Claims 7 and 14, Fig. 2 of Davies et al show a two-turn coil. It would have been obvious to the skilled artisan to employ such a coil arrangement in the Fig. 6a,6b embodiment for the purpose of providing the system shown in Fig. 8, where the plurality of coils and shields are encased in the gate 83 (col. 5, lines 36-43). Regarding Claims 15 and 16, a skilled artisan would have found it obvious that the coils and shields used in the Fig. 8 embodiment are connected in series in order to provide the proper phase and gain to sense the tags passing through the gate. No phase delay is useful because it would not provide the proper signal gain within the gate.

Regarding Claims 17-20, the recitation of the path length, such as one wavelength of the wave, is a function of plate size, and would have been obvious to the skilled artisan because it is desired to conduct the wave along the conductor with respect to resonance of that wave.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al in view of Hadden et al. (5223851).

Regarding Claim 8, Davies et al do not show the converter formed on a semiconductor IC. Hadden et al show and teach contact pads 22,24 of the coil transponder 10,12 mounted upon the IC substrate 30. since the pads are etched on the substrate, it would have been obvious to the skilled artisan to employ the coil shield arrangement of Davies et al on a semiconductor substrate as taught by Hadden et al.

#### ***Response to Arguments***

6. Applicant's arguments filed 2/5/2004 have been fully considered but they are not persuasive. Specifically, the plate 61 of Davis et al does "converge" the magnetic field by virtue of its action thereupon. Since the sizes of the coil 63 and plate 61 are similar, the convergence of the magnetic field is assured. Since the recited structure and evidence of obviousness have been shown, the claims at hand do not patentably define over the prior art of record. The rejections stand.

#### ***Allowable Subject Matter***

7. Claims 9-13 are allowed.

**Conclusion**

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer  
Primary Examiner  
Art Unit 2821

MCW

5/20/04